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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,302

Applicant(s)

DATTA ET AL.

Examiner

CHAU D. LE

Art Unit

2447

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 7-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

1. This Office Action is in response to the Remarks filed on 07/16/2010. Applicant amended claims 1, 7, 18, 21 & 24.
2. The claims 1-2 & 7-26 are pending.

Response to Arguments

3. Applicant's arguments with respect to independent claims 1, 18, 21 & 24 have been considered but are moot in view of the new ground(s) of rejection.

Applicant amended independent claims 1, 18, 21 & 24 to include additional limitations. The rejection has been updated to reflect the newly amended limitations as currently claimed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 7, 9-13 & 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (US Pub No 2002/0184310 A1) in view of Fox et al. (Federated Grids and their Security; 04/20/2003; Retrieved from

http://web.archive.org/web/20051013044806/grids.ucs.indiana.edu/ptliupages/publications/FedGrid_Short.pdf).

With respect to claim 1, Traversat teaches a network environment supporting multiple peer-to-peer relay networks, comprising:

a main peer-to-peer relay network including all peer systems in the multiple peer-to-peer relay networks, at least one of the peer systems including at least one processor (i.e., a global world peer group includes all peer systems and the peers can also belong to multiple peer-to-peer groups ¶ 0132 & Fig. 33 and each peer is a computing device including at least one processor Fig. 1A-B), the main peer-to-peer network having sub-networks within the main peer-to-peer relay network (i.e., the global world peer group includes self-organize peer groups, which is an abstract region of the network and may act as a virtual subnet ¶ 0103 & 0115), wherein each peer system of a sub-network is also a member of the main peer-to-peer relay network (i.e., the global world peer group includes all peer-to-peer platform peers, which teaches a peer system of a sub-network is also a member of a global network, or the main peer-to-peer relay network ¶ 0103 & 0132);

a first peer-to-peer relay network including a plurality of first peer systems that are a first sub-network of the main peer-to-peer relay network, at least one of said first peer systems including at least one processor (i.e., peer group 210B includes peer member 200A and 200B and peer group 210B are a sub-group of the main global group ¶ 0131-0133 & Fig. 33), and including a first particular peer system and a second particular peer system (i.e., 200A and 200B of peer group 210B);

a second peer-to-peer relay network including a plurality of second peer systems that are a second sub-network of the main peer-to-peer network, at least one of said second peer systems including at least one processor (i.e., peer group 210A also includes member 200A and 200B and of the global world peer group ¶¶ 0131-0133 & Fig. 33), and including the first particular peer system and the second particular peer system (i.e., 200A and 200B of peer group 210A); and

wherein a message addressed from a peer in the first peer-to-peer relay network to another peer in the first peer-to-peer relay network is relayed only to peers in the first peer-to-peer relay network (i.e., peer 200F may not have access to service provided by peer group 210B ¶¶ 0130 and peer groups can define a region scope that may limit communication to among themselves ¶¶ 0114-0116 & 0134-0136), and

wherein a message addressed from a peer in the first peer-to-peer relay network to a peer in the main peer-to-peer relay network before the first sub-network is established is relayed to all peers in the main peer-to-peer relay network (i.e., a peer, 200A, may discover one or more peer groups by broadcasting discovery query message, which broadcast the discovery query message to possibly all peers in the global world peer group and if peer 200A is not a member of any peer group, this broadcasting discovery query message occurs before the membership, or first sub-network, is established ¶¶ 0118-0122 & 0283).

Traversat does not explicitly disclose wherein the first particular peer system has a connection to the second particular peer in the first peer-to-peer relay network and the

first particular peer system does not have a connection to the second particular peer in the second peer-to-peer relay network. However, Fox teaches

wherein the first particular peer system has a connection to the second particular peer in the first peer-to-peer relay network and the first particular peer system does not have a connection to the second particular peer in the second peer-to-peer relay network (i.e., creating layered grids, which are overlay of peer-to-peer relay networks, so that Resources R4 and R2 belong to both relay network controlled by Grid Router GR1 and GR2. However, privileges and security walls can allow access between R4 and R2 through one grid router but not the other Pages 9-10 & Fig. 2, which is also analogous to Applicant's published application at section [0117]-[0121] with regards to using Multiple Grids and using smaller grid of the main grid) in order to add fine-grained control when building overlay networks to limit access and security liabilities (Page 3). Therefore, based on Traversat in view of Fox, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Fox to the system of Traversat in order to add fine-grained control when building overlay networks to limit access and security liabilities.

With respect to claim 2, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches further comprising a server connected to each peer system (i.e., the peer devices may serve as a client of or a server to any of the other devices therefore it is possible for a peers to serve as server and be connected to other peer systems ¶ 0019).

With respect to claim 7, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein the peer systems in said first peer-to-peer relay network represent players in an online game (i.e., the peers may include application layer for instant messaging, entertainment content management and delivery, peer-to-peer email systems, distributed auction systems, and many others to include online gaming ¶ 0020-0024).

With respect to claim 9, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein data relayed in said first peer-to-peer relay network is network service data (i.e., the low-level layer provides plumbing services such as peer establishment, communication management and routing, which are network service data ¶ 0161).

With respect to claim 10, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein data relayed in said first peer-to-peer relay network is data for an online environment (i.e., the data relayed could be for file sharing service or instant messaging, hence online environment ¶ 0020 & 0094).

With respect to claim 11, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein data relayed in said first

peer-to-peer relay network is data for a lobby environment (i.e., the top application layer relay data for auctioning which requires a lobby environment or a community environment ¶ 0094).

With respect to claim 12, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein data relayed in said first peer-to-peer relay network is data for a chat room in said lobby environment (i.e., the top application layer relay data that also includes services like AIM instant messaging, which includes a chatroom ¶ 0020 & 0094).

With respect to claim 13, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein data relayed in said second peer-to-peer relay network is data for an online game (i.e., data relayed could be data for the top application layer data such as emailing, auctioning, storage systems, file sharing and AIM Instant Messaging, therefore online gaming data can also be relay with the application layer ¶ 0020 & 0094).

With respect to claim 16, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein at least one peer system is a network-enabled game console (i.e., a peer system can be any electronic device with a digital heartbeat such as a consumer electronic, PDA, appliance, and certainly a network-enable game console ¶ 0022 & 0079).

With respect to claim 17, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein at least two peer systems are connected through the Internet (i.e., the peer-to-peer are connected over the internet ¶¶ 0013-0014).

With respect to claim 18, Traversat teaches a method of replaying data in a peer-to-peer relay networks, comprising:

establishing a main peer-to-peer relay network including all peer systems in the multiple peer-to-peer relay networks, at least one of the peer systems including at least one processor (i.e., a global world peer group includes all peer systems and the peers can also belong to multiple peer-to-peer groups ¶¶ 0132 & Fig. 33 and each peer is a computing device including at least one processor Fig. 1A-B); the main peer-to-peer network having sub-networks within the main peer-to-peer relay network (i.e., the global world peer group includes self-organize peer groups, which is an abstract region of the network and may act as a virtual subnet ¶¶ 0103 & 0115), wherein each peer system of a sub-network is also a member of the main peer-to-peer relay network (i.e., the global world peer group includes all peer-to-peer platform peers, which teaches a peer system of a sub-network is also a member of a global network, or the main peer-to-peer relay network ¶¶ 0103 & 0132);

establishing a first peer-to-peer relay network including a plurality of first peer systems that are a first sub-network of the main peer-to-peer relay network, at least one

of said first peer systems including at least one processor (i.e., establishing a peer group 210B includes peer member 200A and 200B and peer group 210B are a sub-group of the main global group ¶ 0131-0133 & Fig. 33); and including a first particular peer system and a second particular peer system (i.e., 200A and 200B of peer group 210B);

a second peer-to-peer relay network including a plurality of second peer systems that are a second sub-network of the main peer-to-peer network, at least one of said second peer systems including at least one processor (i.e., peer group 210A also includes member 200A and 200B and of the global world peer group ¶ 0131-0133 & Fig. 33), and including the first particular peer system and the second particular peer system (i.e., 200A and 200B of peer group 210A); and

receiving data at a relaying peer system in the first peer-to-peer relay network from a sending peer system connected to the relaying peer system (i.e., a peer system may receive communication messages from other peers ¶ 0114 & 0417-0423);

selecting another peer in the first peer-to-peer relay network corresponding to said received data (i.e., router peer selecting another peer, such as using a route table, to route the communication to ¶ 0422-0431), and

relaying said data to the another peer system (i.e., routing the communication to the destination peer ¶ 0422-0431),

wherein a message addressed from a peer in the first peer-to-peer relay network to another peer in the first peer-to-peer relay network is relayed only to peers in the first peer-to-peer relay network (i.e., peer 200F may not have access to service provided by

peer group 210B ¶ 0130 and peer groups can define a region scope that may limit communication to among themselves ¶ 0114-0116 & 0134-0136), and

wherein a message addressed from a peer in the first peer-to-peer relay network to a peer in the main peer-to-peer relay network before the first sub-network is established is relayed to all peers in the main peer-to-peer relay network (i.e., a peer, 200A, may discover one or more peer groups by broadcasting discovery query message, which broadcast the discovery query message to possibly all peers in the global world peer group and if peer 200A is not a member of any peer group, this broadcasting discovery query message occurs before the membership, or first sub-network, is established ¶ 0118-0122 & 0283).

Traversat does not explicitly disclose wherein the first particular peer system has a connection to the second particular peer in the first peer-to-peer relay network and the first particular peer system does not have a connection to the second particular peer in the second peer-to-peer relay network. However, Fox teaches

wherein the first particular peer system has a connection to the second particular peer in the first peer-to-peer relay network and the first particular peer system does not have a connection to the second particular peer in the second peer-to-peer relay network (i.e., creating layered grids, which are overlay of peer-to-peer relay networks, so that Resources R4 and R2 belong to both relay network controlled by Grid Router GR1 and GR2. However, privileges and security walls can allow access between R4 and R2 through one grid router but not the other Pages 9-10 & Fig. 2, which is also analogous to Applicant's published application at section [0117]-[0121] with regards to

using Multiple Grids and using smaller grid of the main grid) in order to add fine-grained control when building overlay networks to limit access and security liabilities (Page 3). Therefore, based on Traversat in view of Fox, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Fox to the system of Traversat in order to add fine-grained control when building overlay networks to limit access and security liabilities.

With respect to claim 19, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein said relaying peer system is in two or more peer-to-peer relay networks (i.e., a router peer may be used to describe a peer that crosses one or more regions and that is designated to be a router between the regions, therefore is in two or more peer-to-peer relay networks ¶ 0111) and said relaying peer system has respective sets of one or more connections to other peer systems for each peer-to-peer relay network to which said relaying peer system belongs (i.e., Fig. 19& 20 shows router peer having one or more connections to other peer systems).

With respect to claim 20, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches wherein said relaying peer system stores a respective connection limit and a respective set of one of more relay rules for each peer-to-peer relay network to which said relaying peer system belongs (i.e., an endpoint routing protocol may define set of request/query messages that is processed

by a routing service to help a peer route messages to its destination ¶¶ 0402-0405), a connection limit defines a number of other peer systems up to which a peer system is permitted to connect in that peer-to-peer relay network (i.e., peers may self-organize into peer groups with policy to only allow peers within the group to connect to one another ¶¶ 0114-0117) and a set of one or more relay rules defines how a peer system is to relay data to other peer systems connected to that peer system in that peer-to-peer relay network (i.e., when a peer router receives a route query, if it knows the destination, it may answer the query by returning the route information ¶¶ 0404-0407).

The limitation of claims 21 and 24 are rejected in the analysis of claim 18 above, and these claims are rejected on that basis.

The limitation of claims 22 and 25 are rejected in the analysis of claim 19 above, and these claims are rejected on that basis.

The limitation of claims 23 and 26 are rejected in the analysis of claim 20 above, and these claims are rejected on that basis.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (US Pub No 2002/0184310 A1) in view of Fox et al. (Federated Grids and their Security; 04/20/2003; Retrieved from

http://web.archive.org/web/20051013044806/grids.ucs.indiana.edu/ptliupages/publications/FedGrid_Short.pdf), and further in view of Danieli et al. (US Pat No. 7,240,093 B1).

With respect to claim 8, Traversat and Fox disclose the claimed subject matter as discussed above but do not explicitly disclose wherein the peer systems in said first peer-to-peer relay network represent players in said online game that are on the same team. However, Danieli teaches wherein the peer systems in said first peer-to-peer relay network represent players in said online game that are on the same team (i.e., players, or peers, on the network can form teams to participate in online multi-player games Col. 10, line 62 - Col. 11, line 15) in order to isolate communication channels so that the communication between the members are not overhead by other peers not on the same team (Col. 10, line 62 - Col. 11, line 15). Therefore, based on Traversat in view of Fox, and further in view of Danieli, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teaching of Danieli to the system of Traversat in view of Fox in order to isolate communication channels so that the communication between the members are not overhead by other peers not on the same team.

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Traversat et al. (US Pub No 2002/0184310 A1) in view of Fox et al. (Federated Grids and their Security; 04/20/2003; Retrieved from http://web.archive.org/web/20051013044806/grids.ucs.indiana.edu/ptliupages/publications/FedGrid_Short.pdf), and further in view of Thomas W. Lynch (US Pat No. 6,487,600 B1).

With respect to claim 14, Traversat and Fox disclose the claimed subject matter as discussed above and Traversat further teaches further comprising another peer-to-peer relay network including N3 peer systems (i.e., a third peer group is shown on Fig. 33, such as peer group 210C) wherein each peer system in said another peer-to-peer relay network is connected to a number of other peer systems in said another peer-to-peer relay network that is less than or equal to a third connection limit (i.e., each peer group, 210A, 210B or 210C, is in a group connected to relay messages to other peers and the purpose of creating groups is to create a limited scope environment limiting connections to within the group, such that members of one peer group are limited to connecting to only other members of that group ¶ 0130-0133), each peer system in said another peer-to-peer relay network is configured to relay data to peer systems connected to that peer system according to a third set of one or more relay rules (i.e., communications or relay is limited to members of the same group ¶ 0130-0133) and at least one peer system in said another peer-to-peer relay network is also in said first peer-to-peer relay network (i.e., the peer-to-peer relay network doesn't limit how many groups, or relay network, a peer can belong to therefore a Peer Group containing members of multiple peer relay network is possible, such as peer member 200C is a member of peer group 210A and 210C ¶ 0130-0133 & Fig. 33).

Traversat and Fox do not explicitly disclose said third connection limit is greater than or equal to 2, said third connection limit is less than or equal to N3-2. However, Lynch teaches said third connection limit is greater than or equal to 2, said third connection limit is less than or equal to N3-2 (i.e., Fig. 7 shows the connection path

between the peers are limited to greater than or equal to 2 and less than or equal to N-2) in order to allow peers to communicate with others to exchange data (Col. 2, lines 6-13). Therefore, based on Traversat in view of Fox, and further in view of Lynch, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Lynch to the system of Traversat in view of Fox in order to allow peers to communicate with others to exchange data.

With respect to claim 15, Traversat, Fox and Lynch disclose the claimed subject matter as discussed above and Traversat further teaches wherein none of the peer systems in said another peer-to-peer relay network are in said first peer-to-peer relay network (i.e., peer member 200E is not a member of peer group 210A).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Faybishenko et al. (US Pub No 2003/0182421 A1) includes methods for allowing peers to have multiple interfaces to communicate between multiple peer-to-peer relaying networks.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAU D. LE whose telephone number is (571) 270-7217. The examiner can normally be reached on Monday to Friday 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Hwang can be reached on (571) 272-4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D. L./
Examiner, Art Unit 2447
09/30/2010

/Joon H. Hwang/
Supervisory Patent Examiner, Art Unit 2447